

What is claimed is (US)

1. A surface protecting film for polycarbonate, wherein a film substrate having Young's modulus of 1 GPa or more and a pressure sensitive adhesive layer are comprised, the glass transition temperature (T_g) of the pressure sensitive adhesive composing of the adhesive layer being between 40 to 90 °C and the initial 180° peel adhesive strength ($F_{(co)}$) to polycarbonate being between 10 to 300 mN/25mm.

2. The surface protecting film for polycarbonate according to claim 1, wherein assuming a 180° peel adhesive strength to polycarbonate after aging under the heating and pressing (at 70 °C and 20g/cm² for 7 days) as $F_{(hp)}$, and $F_{(hp)}$ and $F_{(co)}$ satisfy the following relational equation (1).

$$(F_{(hp)} - F_{(co)}) / F_{(co)} \leq 3.0 \quad (1)$$

3. The surface protecting film for polycarbonate according to claim 1 or 2, wherein the shear storage modulus of the pressure sensitive adhesive at any temperature of 20 to 40 °C is set to a value within a range of 5×10^8 to 5×10^{10} dyn/cm².

4. The surface protecting film for polycarbonate according to claim 1 or 2, wherein the said pressure sensitive adhesive is made of the three-dimensional cross-linked material comprising the following (A) component and (B) component.

(A): (meth)acrylate copolymer

(B): at least one curable agent selected from an energy ray curable agent and a thermosetting agent.

5. The surface protecting film for polycarbonate according to claim 4, wherein the said component (B) is a photo curable polyurethane acrylate.
6. The surface protecting film for polycarbonate according to claim 4, wherein the said pressure sensitive adhesive is made of the three-dimensional cross-linked material of (meth)acrylate copolymer obtained by using a 15 wt.% or more of monomer having a function group.
7. The surface protecting film for polycarbonate according to claim 1, wherein an adhesion improvement layer is provided between the film substrate and the said adhesive layer.
8. The surface protecting film for polycarbonate according to claim 1, wherein $F_{(RL)}$ and $F_{(CO)}$ satisfy the following relational equation (2) in assuming that the surface protecting film is laminated with polycarbonate of the polycarbonate laminate comprising an adhesive layer provided on a releasing film and polycarbonate on the adhesive layer and the 180° peel adhesive strength between the releasing film and the polycarbonate laminate as $F_{(RL)}$.

$$F_{(RL)} > F_{(CO)} \quad (2)$$